



Impact of interest rate changes on stock market

Subhash Chawla¹, Nilesh Raman², Humanshu Sahu², Brandon Victor Dsouza², Anmol Agrawal²

¹ Assistant Professor, Department of Management, Chouksey Engineering College, Bilaspur, Chhatisgarh, India

² Department of Management, Chouksey Engineering College, Bilaspur, Chhatisgarh, India

Abstract

This paper examines the intricate relationship between interest rate changes and stock market performance, a subject of significant interest to economists, investors, and policymakers. Interest rates, primarily influenced by central bank policies, play a crucial role in shaping economic activities by affecting borrowing costs, consumer spending, and investment decisions. Consequently, changes in interest rates have direct and indirect effects on the stock market, which is a barometer of economic health and investor sentiment. The study explores both theoretical frameworks and empirical data to analyse how interest rate fluctuations impact stock prices and market volatility. Theoretically, interest rate changes influence the cost of capital, corporate profitability, and investor behaviour. Higher interest rates increase borrowing costs for companies, potentially leading to lower profits and reduced stock prices. Conversely, lower interest rates can stimulate economic growth by making borrowing cheaper, which may enhance corporate earnings and boost stock valuations.

Keywords: Interest rate, stock market, economic, investment, investor

Introduction

The relationship between interest rates and the stock market is a fundamental topic in finance and economics, affecting investment strategies, corporate decision-making, and economic policy formulation. Interest rates, primarily determined by central banks, are a critical tool for influencing economic activity. They are used to control inflation, stabilize currency, and foster economic growth. Changes in interest rates can have profound effects on various aspects of the economy, including consumer spending, business investment, and ultimately, stock market performance. The stock market is a vital component of the financial system, reflecting the collective expectations of investors about future economic conditions and corporate profitability. It serves as a barometer of economic health, with stock prices influenced by various factors, including interest rates. Understanding how interest rate changes impact the stock market is essential for investors, who seek to maximize returns and manage risks, and for policymakers, who aim to maintain economic stability.

Interest rates affect the stock market through multiple channels. Firstly, they influence the cost of borrowing for companies. Higher interest rates increase the cost of capital, which can lead to reduced corporate profits and lower stock prices. Conversely, lower interest rates make borrowing cheaper, potentially boosting investment and corporate earnings, leading to higher stock valuations. Secondly, interest rates impact consumer spending and savings decisions. Higher rates encourage savings over consumption, potentially slowing economic growth, while lower rates can stimulate spending and investment. Furthermore, interest rate changes can alter investor behaviour and market sentiment. In an environment of rising rates, investors may shift from stocks to fixed-income securities to take advantage of higher yields.

This paper aims to explore the multifaceted relationship between interest rate changes and stock market performance. It examines both theoretical frameworks and empirical evidence to provide a comprehensive

understanding of how interest rate fluctuations influence stock prices and market dynamics. By analysing historical data and identifying trends, this study seeks to offer valuable insights for investors and policymakers in navigating the complexities of financial markets.

Objective of the study

The primary objective of this research paper is to explore and elucidate the relationship between interest rate changes and stock market performance. The study aims to achieve the following specific objectives:

- Determine the general public's familiarity with the concept of interest rates.
- Evaluate the extent to which individuals follow news about interest rates.
- Investigate how interest rate changes influence personal investment strategies.
- Determine the primary sources of information the public relies on to understand interest rate impacts.
- Examine actions taken by investors in response to interest rate changes, including shifts in asset allocation.
- Understand public opinion on the effectiveness of central banks in managing the economy through interest rate adjustments.
- Collect additional comments and thoughts from the public regarding interest rate changes and their impact on the stock market.

Scope of the study

The scope of this research encompasses the following elements:

- Collect and analyze demographic information including age, gender, education level, occupation, and investment experience.
- Identify gaps in financial literacy and the demand for better educational resources related to interest rates and stock market dynamics.

- Use a structured questionnaire to gather data from a diverse sample of respondents.
- Employ statistical and thematic analysis techniques to interpret the collected data and derive meaningful conclusions.
- Measure the confidence levels of individuals regarding their understanding of the relationship between interest rates and the stock market.
- Assess the general public's familiarity with interest rates.
- The study will employ a combination of qualitative and quantitative methods.

By defining clear objectives and a well-delineated scope, this research paper seeks to contribute valuable insights into the understanding of how interest rate changes affect the stock market, providing guidance for investors and policymakers in an increasingly dynamic financial environment.

Literature review

Discounted cash flow (DCF) model: One of the primary theories explaining the impact of interest rates on stock prices is the DCF model. According to this model, stock prices represent the present value of expected future cash flows. Higher interest rates increase the discount rate, reducing the present value of these cash flows and, consequently, the stock prices (Modigliani & Miller, 1958).

Cost of Capital: Interest rates also affect the cost of capital for companies. Higher rates increase borrowing costs, which can reduce corporate profits and lead to lower stock prices (Fama, 1981)^[3].

Investor behaviour and risk appetite: Changes in interest rates influence investor behaviour and risk appetite. Lower interest rates typically drive investors towards higher-yielding, riskier assets like stocks, whereas higher rates might push them towards safer, fixed-income securities (Tobin, 1969).

Historical analysis: Numerous studies have analysed historical data to ascertain the relationship between interest rate changes and stock market performance. Rigobon and Sack (2003) found a significant negative relationship between interest rate increases and stock returns in the U.S. market. Similarly, Bernanke and Kuttner (2005)^[1] showed that unexpected changes in the Federal Reserve's policy rates lead to substantial stock market reactions.

Sector-specific impacts: Interest rate changes do not affect all sectors equally. For instance, banks and financial institutions might benefit from higher rates due to increased lending margins, whereas high-debt sectors like utilities and real estate might suffer due to higher borrowing costs (Reilly, Johnson, & Smith, 1970).

Global perspectives: The impact of interest rate changes is not confined to the U.S. market. Studies on emerging markets, such as those by Mylonidis and Kollias (2010), have shown that interest rate changes can lead to more

pronounced volatility in stock prices due to less mature financial markets and differing monetary policy frameworks.

Event studies: Event study methodology is commonly used to measure the impact of interest rate changes on stock prices by analysing abnormal returns around the announcement dates of interest rate changes (Fama, Fisher, Jensen, & Roll, 1969)^[4].

Vector autoregression (VAR) models: VAR models are used to capture the dynamic relationship between interest rates and stock prices, accounting for the influence of multiple macroeconomic variables (Sims, 1980).

GARCH models: Generalized Autoregressive Conditional Heteroskedasticity (GARCH) models help in understanding the volatility clustering in stock returns following interest rate changes (Bollerslev, 1986)^[2].

While the general consensus supports a negative relationship between interest rate hikes and stock prices, the strength and nature of this relationship can vary based on several factors:

Monetary policy credibility: In environments where central banks have high credibility, interest rate changes might have a more predictable impact on stock prices (Goodfriend, 1993)^[5].

Economic context: The prevailing economic conditions, such as whether the economy is in a recession or expansion, can modulate the stock market's response to interest rate changes (Thorbecke, 1997).

Expectations and communication: The stock market's reaction can also depend on whether the interest rate change was anticipated and how well the central bank communicated its policy stance (Kuttner, 2001)^[6].

Methodology of study

This study is a systematic presentation consisting of the enunciated problem, formulated hypothesis, collected facts of data, analysed facts and proposed conclusions in form of recommendations. This kind of research has the primary objective of development of insights into the problem. It studies the main area where the problem lies and also tries to evaluate some appropriate courses of action. The data has been collected from both primary and secondary sources. A complete interaction and enumeration of all the investors in Bilaspur Chhattisgarh was not possible so a sample was chosen that consisted of 150 respondents. The research was taken by necessary steps to avoid any biased while collecting the data. Stratified random sampling is employed to ensure representation from different segments of the population, providing a balanced and comprehensive dataset. The data collected from both the sources is analysed and interpreted in the systematic manner with the help of statistical tool like percentages.

Data analysis & interpretation

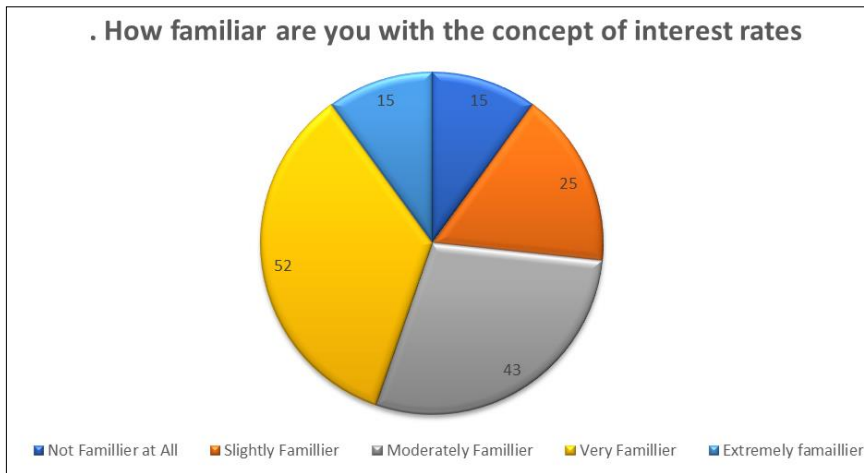


Fig 1

Interpretation- The data indicates that the majority of respondents are familiar with interest rates, with 52 being very familiar and 43 moderately familiar. However, a

smaller group (15 respondents) are not familiar at all, and (25 respondents) are slightly familiar, (15 respondents) are extremely familiar.

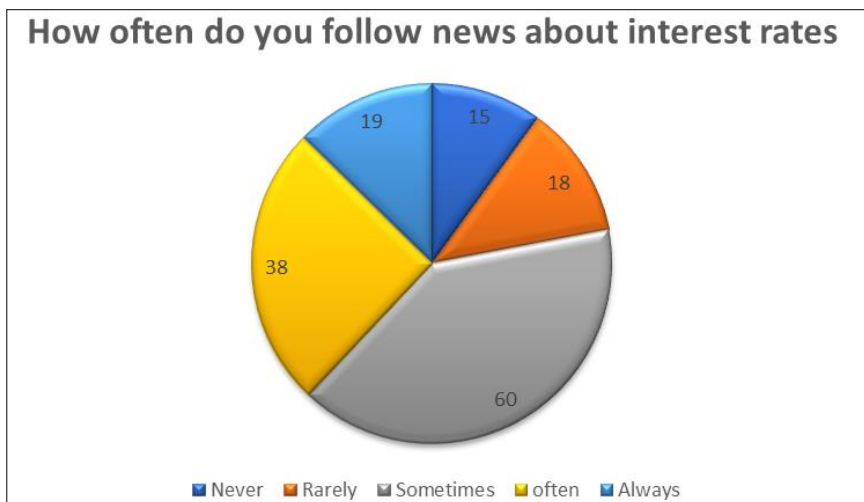


Fig 2

Interpretation –A majority of respondents (60) follow news about interest rates "Sometimes," with a significant portion (38) doing so "Often" and (19) "Always." This suggests that while interest in following interest rate news is

high, there is a significant variability in how closely different individuals track this information. Only a small number of respondents (15) "Never" follow such news.



Fig 3

Interpretation: A majority of respondents (80) perceive interest rate changes as having a positive impact on the stock market, with 50 seeing a slightly positive impact and 30 seeing a strongly positive impact. In contrast, 55

respondents believe the impact is negative, with 35 seeing a strongly negative impact and 20 seeing a slightly negative impact. Only a small group (15) thinks that interest rate changes have no impact.



Fig 4

Interpretation: Opinions are divided on the impact of interest rate changes on stock prices. A plurality (50 respondents) believe that stock prices generally increase when interest rates change, while 40 respondents think that

stock prices generally decrease. Another 30 respondents feel that stock prices remain unaffected, and an equal number (30) are unsure of the impact.

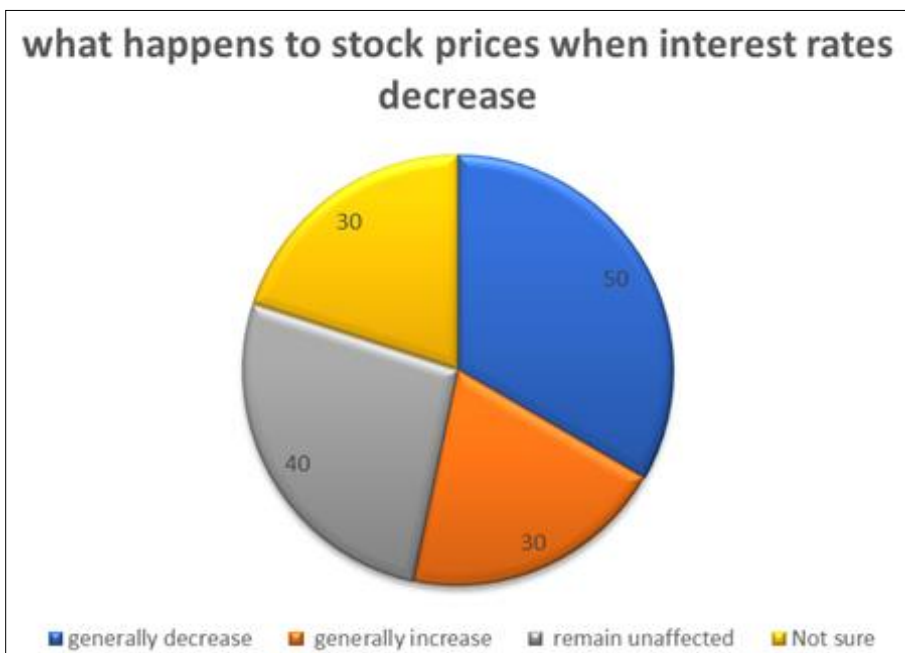


Fig 5

Interpretation: A plurality of respondents (50) believe that stock prices generally decrease when interest rates change. Meanwhile, 30 respondents think that stock prices generally

increase, and 40 respondents feel that stock prices remain unaffected. An additional 30 respondents are unsure about the impact.

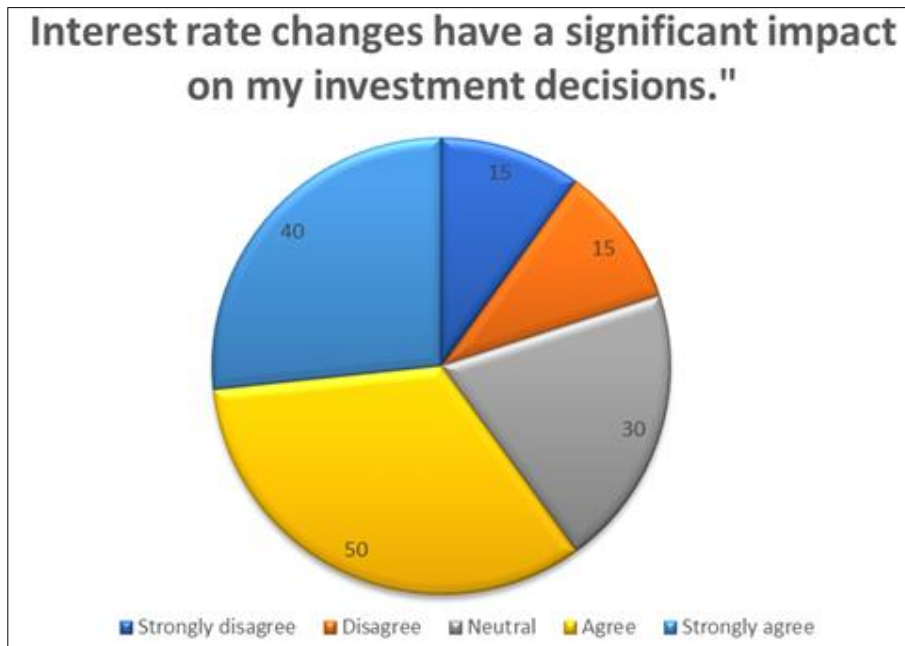


Fig 6

Interpretation: The majority of respondents (90) either agree or strongly agree that interest rate changes have a significant impact on their investment decisions. Specifically, 50 respondents agree and 40 strongly agree, indicating a clear acknowledgment of the importance of interest rates in shaping investment strategies. Meanwhile, 30 respondents are neutral on the statement

Findings

The majority of respondents were aged between 25-44. Many respondents follow news about interest rates at least sometimes, indicating a general interest in the topic. Most respondents believe that changes in interest rates have at least some impacts on the stock market. A significant number of respondents indicated a negative impact of increasing interest rates on stock prices, while they generally saw a positive impact when interest rates decrease. Many respondents reported changing their investment strategies based on interest rate changes. Common actions included buying or selling stocks, and shifting investments to bonds or other assets like real estate. Financial news websites and TV news channels were the most commonly used sources of information. Social media and financial advisors also played a significant role in informing respondents.

Conclusion

This project investigated public perceptions and understanding of the impact of interest rate changes on the stock market through a comprehensive questionnaire. Key findings indicate that while there is a general awareness of interest rates and their potential impact on stock prices, many individuals still lack confidence in their understanding of this relationship. Most respondents believe that increasing interest rates negatively affect stock prices, whereas decreasing rates have a positive impact. The Financial, Real Estate, and Utilities sectors are perceived as the most sensitive to interest rate changes. Despite varying levels of investment experience, there is a clear need for better financial education and more accessible information sources. Respondents predominantly rely on financial news

websites and TV channels for information, but also express a desire for clearer, more reliable educational resources. Overall, these insights underscore the importance of enhancing public financial literacy and providing more effective communication about economic policies and their implications for the stock market.

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